TESTING THE MEASURES OF A MAN: A VALIDITY ANALYSIS OF SIX MASCULINITY NORMS

by

B. Brian Kuhlman

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STATEMENT OF THESIS APPROVAL

The thesis of **B. Brian Kuhlman**

has been approved by the following supervisory committee members:

Dan J. Woltz	, Chair	**March 23, 2012** Date Approved
John C. Kircher	, Member	**March 23, 2012** Date Approved
Douglas Hacker	, Member	**March 23, 2012** Date Approved

and by **Elaine Clark** , Chair of

the Department of **Educational Psychology**

and by Charles A. Wight, Dean of The Graduate School.

ABSTRACT

Very few studies have investigated the construct validity of measures of masculinity. This study analyzed multitrait multimethod matrices of male and female subscale scores from the Male Role Norms Inventory-Revised (MRNI-R), the Conformity to Masculine Norms Inventory (CMNI), and the Gender Role Conflict Scale (GRCS). Six subscales were of interest. Specifically, measures of dominance, homophobia, restrictive emotionality, nonrelational sexuality, aggression, and self reliance were given to 176 undergraduates from a large university in Utah. Subscale correlations were compared to indicate convergent and discriminant validity, as well as method effects, for each masculinity measure. Generally, the measures performed slightly better among males than females and the multidimensional structure of the CMNI was supported. Surprisingly, results indicated modest or poor validity among many of the subscales. These results were explained in terms of a construct confound on the GRCS, a very high method effect for the MRNI-R, and inconsistency between constructs and definitions among the measures. Finally, a preliminary content analysis of masculinity scales generated hypotheses about convergence between masculinity science and other social science disciplines. Limitations of this study and recommendations for future research were noted.

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CHAPTER 1

INTRODUCTION

While homegrown attempts to measure masculinity may be as old as civilization, there were no scientific attempts until the late 20th century. Modern masculinity science was launched when David and Brannon (1976) outlined a "blueprint for manhood." As will be detailed below, the field of masculinity science has searched for more perfect ways to measure manliness throughout the last few decades.

David and Brannon (1976) defined four male role norms: *no sissy stuff* – men should avoid anything even vaguely feminine; *the big wheel* – men should gain status, success, and respect; *the sturdy oak* – men should be tough and show no signs of weakness; *give 'em hell* – men should seek adventure and carry an aura of aggressiveness. "This masculinity is non-feminine (or anti-feminine), independent, status-oriented, heterosexual (or anti-homosexual), tough, and takes risks" (Smiler, 2004, p. 18).

Eight years later, the Brannon Masculinity Scale (Brannon & Juni, 1984) was developed upon these four masculinity norms. Another eight years after that, Levant and colleagues (1992) noted redundancy and overlap among some of the subscales. They also noted that the scale omitted basic dimensions of the male role, including fear and hatred of homosexuals and non-relational sexual attitudes. Such findings led to a proliferation of instruments to measure different aspects of masculinity.

Constructing the Measures of a Man

O'Neil, Helms, Gable, David, and Wrightsman (1986) developed the Gender Role Conflict Scale (GRCS) for the purpose of studying men's personal gender role attitudes, behaviors, and conflicts (O'Neil, Good and Holmes, 1995). Specifically, the GRCS purports to measure four clusters of male gender role experiences – conflict between work and family roles, difficulty expressing emotions, restricted affectionate behavior with other men, and compulsion to be successful.

Levant and Fischer (1998) developed the original Male Role Norms Inventory (MRNI) to measure seven traditional attitudes about masculinity – avoidance of femininity, homophobia, Self Reliance, aggression, achievement / status-seeking, attitudes towards sex, and restrictive emotionality – as well as one nontraditional attitudes subscale (e.g., "A boy should be allowed to quit a game if he is losing"). For a number of reasons, the original MRNI was recently revised (see Levant et al., 2007). The MRNI-Revised purports to measure seven constructs of masculinity, six of which are detailed below.

As Smiler (2006) noted, male role measures may be written in a manner that assesses social norms about male behavior (e.g., the MRNI) or that assesses the extent to which individuals conform to those norms. The Conformity to Masculine Norms Inventory (CMNI; Mahalik et al., 2003) assesses "the extent to which an individual male conforms or does not conform to the actions, thoughts and feelings that reflect masculinity norms in the dominant culture in U.S. society" (p. 5). Following a series of psychometric studies, Mahalik's team published the CMNI with 11 distinct subscales.

At first glance, there appears to be significant construct convergence among these instruments. Specifically, the MRNI-R and the CMNI have six subscales that appear to measure similar constructs; the GRCS has three subscales that also appear to overlap. These six masculinity constructs have been described in masculinity literature as well as in other

social science domains. The operational definitions of these constructs are where the discussion turns next. Each of the following constructs will be discussed in terms of (i) how masculinity measures operationalize the construct, (ii) how the construct has been defined by other social science fields, (iii) research regarding the nomological net (i.e., evidence of convergence and discriminance) for each construct, and (iii) research suggesting that the construct belongs in masculinity science.

Dominance

This construct is synonymous with status-seeking. In describing their big wheel aspect of masculinity, David and Brannon (1976) focused on various symbols of success (e.g., wealth, fame, career status, competence). Masculinity is equated with success, and these symbols are hallmarks of both. The MRNI-R Achievement / Status, the CMNI Dominance, and the GRCS Status / Power / Competition subscales attempt to measure this construct. Items from these subscales ask how much participants agree or disagree with statements like the following: “A man should always be the boss” (MRNI-R); “I should be in charge” (CMNI); “I often feel that I need to be in charge of those around me” (GRCS).

Levant and colleagues (2007) used the CMNI and GRCS to investigate the construct validity of the MRNI-R. However, they failed to publish a correlation matrix at the subscale level. Therefore, it is unknown how the MRNI-R subscale interacts with the others. We do know, however, how the CMNI and GRCS subscales tend to interact. Mahalik and colleagues (2003) observed a moderately strong relation ($r = 0.59$) between CMNI Dominance and GRCS Success, Power, and Competition. We also know that social dominance orientation appears to be distinct from masculine dominance. Mahalik and colleagues (2003) found that CMNI Dominance was unrelated to scores on the Social Dominance Orientation Scale (Pratto, Sidanius, Stallworth & Malle, 1994), which measures people’s preference for social

dominance hierarchies. Thus, it appears that reports of antiegalitarian attitudes are unrelated to reports of masculine status-seeking.

A multitude of self-report measures of dominance and status-seeking are used outside of masculinity science. For example, the California Personality Inventory, the Life-Style Personality Inventory, the Manifest Needs Questionnaire, the Personality Research Form, and the Adjective Check List all include dominance subscales. These subscales tend to define dominance as a status-seeking personality trait. One measure, the Dominance Scale (Hamby, 1996), defines dominance using three subconstructs: authority, restrictiveness, and disparagement. The nomological net between personality and masculinity measures of dominance is yet to be researched.

There is mixed evidence regarding the place of dominance in masculinity science. Some researchers propose innate sex differences in dominance, whereas other researchers refute such theories. For instance, studies have found that there are similar correlates of dominance and competitiveness across the sexes, giving credence to the concept of the social "alpha" among females and males alike (cf. Hawley, Little, & Card, 2008). This finding may be consistent with studies linking testosterone to status-seeking across the sexes. For instance, one study found that a mismatch between testosterone levels and status levels strongly predicted status-seeking behaviors in males and females (Josephs, Sellers, Newman, & Mehta, 2006). Therefore, individual differences in dominance may be due to differences in testosterone, rather than gender.

Despite evidence of female dominance, this construct remains a defining feature of masculinity. This may be due to the fact that a majority of the leadership roles in our society are taken by men. It may also be due to the appearance of robust sex differences in regards to behavioral responses to threats. Taylor and colleagues (2000) discussed evidence for a female tend-and-befriend stress response to contrast with the male fight-or-flight response. Luxen

(2005) found that males tended to show marks of dominance (e.g., head shaking, sitting in a closed posture, and using closed questions and directive remarks) under stressful interview conditions. In contrast, females in that sample showed more affiliation (e.g., laughing, sitting in an open posture, and posing open questions) in response to stress (Luxen, 2005). Noakes and Rinaldi (2006) found that boys tend to fight about status and dominance issues, whereas girls tend to argue about relational issues. No studies have studied how well masculinity measures of dominance predict these behaviors.

Homophobia

David and Brannon (1976) described their no sissy stuff masculine norm by elucidating the concepts of male homophobia and heterosexism. They described men's irrational fear and disdain of homosexuality and their subsequent restriction of affection towards other men. The MRNI-R Fear and Hatred of Homosexuals, the CMNI Disdain for Homosexuals, and the GRCS Restrictive Affectionate Behavior between Men subscales attempt to measure this construct. Items from these subscales ask how much participants agree or disagree with statements like the following: "Homosexuals should never kiss in public" (MRNI-R); "It would not bother me at all if someone thought I was gay" (CMNI; reverse loaded); "Men who touch other men make me uncomfortable" (GRCS).

The lengthy names of these subscales reflect the complex nature of this construct. Hudson and Ricketts (1980) suggested a distinction between homonegativism (i.e., a multidimensional cognitive construct including many antigay attitudes, beliefs, and judgments) and homophobia (i.e., a unidimensional construct encompassing more visceral, affective and anxious responses to homosexuality). A third construct, internalized heterosexism, is used to explain the causes and effects of homophobia and homonegativism among homosexual people (see Johnson, Carrico, Chesney, Morin, 2008).

A number of self-report measures of similar constructs have been developed. Pongratz (2005) administered nine established measures of homophobia to 586 participants and observed a two factor structure – Moral Beliefs and Personal Discomfort / Anxiety – for this construct. This finding supports the distinction between homonegativity and homophobia suggested by Hudson and Ricketts (1980). Unfortunately, none of the CMNI, MRNI-R or GRCS subscales were included in these analyses, so it is unclear whether they are more closely related with homonegativity or homophobia. Homophobia is the term used in this study because it is used more broadly than homonegativity among researchers (for a thorough discussion of terms see Haaga, 1992). Mahalik and colleagues (2003) observed a 0.40 correlation between these CMNI and GRCS subscales. No other masculinity studies have tested convergence for this construct.

There are three strong indications that this construct belongs in masculinity science. First, traditional gender role attitudes show unique and strong correlations with antigay and antilesbian attitudes (Goodman & Moradi, 2008). This does not explain causation, but it argues that the two constructs have a "family resemblance."

Second, there appear to be notable gender differences in manifestations of homophobia. Generally, women report less hostility and animosity toward homosexuals than men do (D'Augelli & Rose, 1990). Perpetrators of aggressive acts towards homosexuals are typically young men who aggress against individuals whom they perceive to be male homosexuals (Harry, 1990). Among African American people, gender appears to be a better predictor of homophobia than age, income, religiosity, or education level (Battle & Lemelle, 2002). One study found that aggression proneness was predictive of homophobia only in men; benevolent sexism and rape myth acceptance were more predictive of homophobia in women than men (Nagoshi et al., 2008). Another study found higher homophobia among

military personnel than among male university students and more homonegativism among male students than female students (Lingiardi, Falanga, D'Augelli, 2005).

Third, studies have found interesting differences between homophobic and nonhomophobic men. Adams, Wright, and Lohr (1996) found that all male participants showed arousal to heterosexual erotica. However, only homophobic men exhibited penile erection in response to male homosexual stimuli; nonhomophobic heterosexual men did not get aroused to the stimuli. A follow-up study (Bernat, Calhoun, Adams, & Zeichner, 2001) found that, after watching homosexual erotic videotape, homophobic men reported more negative affect, anxiety, and anger-hostility than did nonhomophobic men. Additionally, the homophobic men were aggressive toward a homosexual opponent but not toward a heterosexual opponent (Bernat, Calhoun, Adams, & Zeichner, 2001).

Restrictive Emotionality

Male emotionality may be the most well-defined masculinity construct. David and Brannon (1976) explained one aspect of the no sissy stuff norm by writing, "Probably no action is more stereotypically feminine or humiliating for a man than crying" (p.17). They further explained that emotions suggesting power (e.g., anger) are often permitted among men, but emotions suggesting vulnerability or strong positive feeling (e.g., affection) are rarely permitted. In line with this theme, the MRNI-R Restrictive Emotionality, the CMNI Emotional Control, and the GRCS Restrictive Emotionality subscales attempt to measure this construct. Items from these subscales ask how much participants agree or disagree with statements like the following: "Men should be detached in emotionally charged situations" (MRNI-R); "I never share my feelings" (CMNI); "Expressing feelings makes me feel open to attack by other people" (GRCS).

Restrictive emotionality is a cross-disciplinary construct. Within affective science, restrictive emotionality is a type of emotion regulation. Within stress management science,

restrictive emotionality is a coping style typically referred to as emotion inhibition. Emotion inhibition (i.e., the nonexpression of emotion) is contrasted with emotion suppression or avoidance (i.e., the nonidentification of emotion).

Studies from these fields support the inclusion of this construct in masculinity science. For example, Watson and Sinha (2008) found different profiles of emotion regulation and coping styles among males and females. Specifically, females endorsed a profile including aggression control, avoidance, social diversion, and distraction; in contrast, males endorsed a profile indicating emotion inhibition (Watson & Sinha, 2008). Similarly, Matud (2004) observed that women displayed more avoidance coping styles than men, and that men displayed more emotion inhibition than women.

Masculinity scientists (Wong, Pituch, & Rochlen, 2006) investigated the nomological net of the GRCS Restrictive Emotionality subscale, finding that 28% of variance on the measure is explained by negative attitudes towards emotional expression. Interestingly, they also found that measures of emotion suppression explained no variance on the measure (Wong, Pituch, & Rochlen, 2006). Clearly, this construct is tied to the nonexpression of emotion, not to willful ignorance or avoidance of emotion. No studies have investigated the nomological net of the CMNI and MRNI-R Restrictive Emotionality subscales.

Nonrelational Sexuality

American men sometimes use the phrase “just another notch on the old belt” to describe a sexual encounter. In this way, men distance themselves from emotional vulnerability, and they also posture themselves as higher ranking than they were before that encounter. Among some circles of men, there is a “numbers game” wherein the man who sleeps with the most women wins. In this way, men’s sexuality is often framed by David and Brannon’s (1976) big wheel norm. The MRNI-R Nonrelational Sexuality and the CMNI Playboy subscales attempt to measure this construct. Items from these subscales ask how

much participants agree or disagree with statements like the following: “A man should not turn down sex” (MRNI-R); “Emotional involvement should be avoided when having sex.” (CMNI).

Research suggests that this construct belongs in masculinity science. Walker, Tokar, and Fischer (2000) found that masculinity instruments, including the GRCS, predicted some variance in the Sociosexual Orientation Inventory (SOI; Simpson & Gangestad, 1991). The SOI purports to measure male and female participant’s willingness to engage in sexual relations without indicators of emotional bonding, like closeness or commitment (Simpson & Gangestad, 1992). Individuals who score high on the SOI are said to have an unrestricted sexuality. “Studies comparing women and men have suggested that an unrestricted sociosexual orientation may be problematic when endorsed by men but relatively innocuous when endorsed by women” (Yost & Zurbriggen, 2006, p.163). Clark (2006) found that sociosexuality correlated with self-esteem and self-perceived mating success among males but not females.

No studies have tested how MRNI-R Nonrelational Sexuality or CMNI Playboy correlate with measures of sociosexuality. Additionally, how these two subscales relate with one another has been untested.

Aggression

David and Brannon (1976) described how men are taught to exude “the aura of aggression, violence, and daring” (p.27). The MRNI-R Aggression and the CMNI Violence subscales attempt to measure this construct. Items from these subscales ask how much participants agree or disagree with statements like the following: “If another man flirts with the woman accompanying a man, this is a serious provocation and the man should respond with aggression” (MRNI-R); “Sometimes violent action is necessary” (CMNI).

By including the aggression construct, masculinity science joins a very active conversation within the social sciences. Specific forms of aggression being studied include road rage, workplace violence, microaggressions, verbal discrimination, sexual violence, domestic abuse, terrorism, hate crimes, and aggression due to medical conditions (e.g., dementia). Researchers have begun to parse out aggression from related constructs like anger, impulsivity, and hostility (Ramirez & Andreu, 2006). Aggression scientists have subdivided the construct into categories of bullying versus peer-victimization (Hunter, Boyle, & Warden, 2006), reactive versus proactive aggression (Poulin & Boivin, 2000), and overt physical versus indirect relational aggression (Underwood, Galen, & Paquette, 2001). A growing number of academic journals are devoted to the study of aggression, and the topic can be considered a field of its own.

There are a number of indications that aggression belongs in masculinity science. For example, many studies have found that incidents of overt physical aggression are significantly more frequent among males than females. Indirect relational aggression, on the other hand, appears to manifest equally across the sexes (for meta-analytic review see Card, Stucky, Sawalani, & Little, 2008). Interestingly, one recent review of gender differences in aggression (Richardson & Hammock, 2007) suggested that gender roles (i.e., conformity to masculine or feminine roles) are better predictors of aggression than gender.

The measurement of aggression is also a hot topic. The plethora of aggression measures include the Assaultiveness Scale of the Buss Durkee Hostility Inventory, the EXPAGG, the Cuestionario sobre Actitudes Morales ante la Agresión (CAMA), the Aggression Questionnaire, the Overt Aggression Scale-Modified, the State-Trait Anger Expression Inventory-2, and the Life History of Aggression assessment (for reviews of these and related measures, see Surris & Coccaro, 2008, and Ramirez & Andreu, 2006). It is

unclear how the CMNI Violence and MRNI-R Aggression subscales fit into this nomological net from aggression science. Additionally, masculinity scientists have not studied how these two subscales correlate with one another.

Self-Reliance

A recent U.S. military slogan paints the picture of an "Army of One." Men are prescribed to be independent and to despise asking for help. The MRNI-R Extreme Self-Reliance and the CMNI Self-Reliance subscales attempt to measure this construct. Items from these subscales ask how much participants agree or disagree with statements like the following: "Men should not borrow money from friends or family members" (MRNI-R); "I am not ashamed to ask for help" (CMNI; reverse loaded).

Research on help-seeking, attachment theory, and cultural psychology investigate the construct of Self-Reliance in distinct manners. Cultural theorists include self reliance in the definition of individualism, which is distinct from collectivism. Research suggests two distinct kinds of individualism – horizontal and vertical – that may connect to masculinity constructs. Horizontal individualism appears close to concepts of self-reliance and independence, whereas vertical individualism appears closer to concepts of dominance and status-seeking. Studies using the Individualism / Collectivism Scale (Singelis, Triandis, Bhawuk & Gelfand, 1995) have found robust support for the distinctness of horizontal and vertical individualism (for extensive reviews of these constructs see Komarraju & Cokley, 2008; Schimmack, Oishi, & Diener, 2005; Triandis & Gelfand, 1998). This may suggest that masculinity scientists are correct to measure self-reliance and dominance as separate constructs, but the convergence and discriminance of these masculinity and cultural constructs remains to be tested.

Attachment theory suggests three types of relational styles – interdependent, counterdependent, and overdependent – that may also connect to masculinity constructs.

Interdependence is characterized by reciprocity and flexibility in relationships. Counterdependence is marked by frequently overinvesting in work activities, resisting supportive offers, and isolating. Overdependence is defined by seeking out and relying on more supports than are appropriate for the situation. Bowlby initially called the interdependent relational pattern "self-reliant" and studies using the Self-Reliance Inventory have found that interdependence is defined by autonomous behavior in the workplace (Daus & Joplin, 1999; Quick, Joplin, Nelson, Mangelsdorff, & Fiedler, 1996; Quick, Joplin, Nelson, & Quick, 1992). However, it appears that masculine self-reliance is conceptually closer to counterdependence as it emphasizes an aversion to help-seeking. However, no studies have looked at how the CMNI and MRNI-R Self-Reliance subscales relate to the Self-Reliance Inventory subscales.

Research on help-seeking attitudes and behaviors provide some evidence that the construct of self-reliance belongs in masculinity science. Help-seeking studies conceptualize self-reliance as a stress coping technique marked by a preference to deal with health problems on one's own (Ortega & Alegria, 2002). A study of help-seeking among people with mental health problems found that males, young people, and people living in affluent areas were the least likely to seek help (Oliver, Pearson, Coe, & Gunnell, 2005). One study found interesting gender differences in perceptions of self-reliance among children with diabetes. Specifically, diabetic boys perceived themselves as more self-reliant than their caretakers perceived them to be, whereas diabetic girls' perceptions of self-reliance were in line with those of their caretakers (Mansfield, Addis, Laffel, & Anderson, 2004).

Masculinity scientists have done interesting work in regards to help-seeking and healthcare. One study of men with prostate cancer found that CMNI Self-Reliance and locus of control beliefs moderated the relationship between physical and mental health (Burns & Mahalik, 2006). Rochlen and Hoyer (2005) discussed various efforts to market mental health

services, and reduce help-seeking stigma, among men. The widespread under-utilization of healthcare services among men may provide the strongest argument for the inclusion of self-reliance in masculinity science.

In sum, there is generally strong support for the inclusion of these six constructs within masculinity science. Research from older social sciences (e.g., social, personality, cultural, sexuality, and affective sciences) provides a broad base of measures and construct definitions that appear to converge with masculinity constructs. The lack of cross-disciplinary research involving masculinity measures sheds light on the relative nascence of masculinity science. The discussion turns next to work that has been completed towards this end.

Validating Masculinity Constructs

The literature on construct validity for masculinity measures is typically very positive. Most of the published studies suggest that the measures perform well among their respective nomological networks (e.g., Levant et al., 2007). Numerous studies demonstrate concurrent validity of this concept by demonstrating strong correlations between masculinity and problems such as interpersonal violence (Jakupcak, Lisak, & Roemer, 2002), binge drinking and marijuana use (Liu & Iwamoto, 2007), poor recovery from prostate cancer (Burns & Mahalik, 2006), and interpersonal distress (Sipes, 2005).

Confirmatory Factor Analysis (CFA) is one rigorous method of construct validity analysis. To date, there have been no CFA studies conducted using the MRNI-R. However, one CFA of the original MRNI (Levant et al., 1992) demonstrated that most of its subscales loaded onto a single factor, which suggests that it measures one dimension – not multiple dimensions – of masculinity. In contrast, two CFA validation studies of the CMNI (Mahalik et al., 2003; Smiler, 2006) and multiple CFA studies of the GRCS (e.g., Good et al., 1995; Moradi, Tokar, Schaub, Jome & Serna, 2000; Sipes, 2005) found that the original models for these instruments do hold up when compared with alternative factor models. Therefore, we

can have some degree of confidence that these instruments have subscales that are distinct from other subscales within the same instrument.

However, we cannot be sure that the subscales of one masculinity instrument show appropriate patterns of relationship with subscales of other masculinity instruments. In order to address this, a more detailed analysis of convergent and discriminant validity is needed; this is what the Multitrait Multimethod (MTMM; see Campbell & Fiske, 1959) analysis offers. To date, no MTMM studies have been performed on male role instruments. As such, the following paragraphs provide an outline of this analytic procedure.

MTMM matrices divide correlations into three categories: Monotrait-Heteromethod (MH), Heterotriat-Heteromethod (HH), and Heterotrait-Monomethod (HM) correlations. The matrix also displays internal consistency estimates along the diagonal.

In MTMM analysis, correlations between theoretically similar constructs (i.e., MH correlations) indicate convergent validity. A strength of MTMM analysis is that estimates of convergence are contextualized by estimates of discriminance. Discriminant validity is indicated by correlations between theoretically distinct subscales. Trait discriminance is demonstrated when MH correlations are higher than HH correlations for that trait. Similarly, estimates of method effects (i.e., HM correlations) are analyzed in comparison to discriminant estimates. Method effects are indicated when HM correlations are higher than HH correlations for that method. Good measures will demonstrate strong convergent and discriminant estimates, and no method effects.

In the present study, traits are masculinity constructs and methods are masculinity measures. Specifically, six masculinity constructs – dominance, homophobia, restrictive emotionality, nonrelational sexuality, aggression, and self-reliance – are each measured by the MRNI and the CMNI. The GRCS provides a third measure of dominance, homophobia and restrictive emotionality.

CHAPTER 2

PROCEDURES

Participants

Participants (n = 176) in this study included male and female college students recruited, on a voluntary basis, from undergraduate courses at a large university in Utah. Before conducting data analysis, the researcher identified missing data and deleted participant rows (n = 7) that were missing more than five items. A total of 169 participants were included in the data analysis.

Most of the sample identified as female (68%), Non-Hispanic Caucasian (85.5%), under 30 years old (85.2%), heterosexual (91.3%), LDS-affiliated (57%), and Utah residents for over 13 years (69.8%). In terms of relationship status, 49.7% of this sample identified as single, 29.7% as married, 17.4% as seriously dating, and 2.3% as divorced. Socioeconomic status appeared to be normally distributed in this sample, with 5.3% reporting low, 27.2% lower-middle, 52.1% middle, 14.2% upper-middle, and 1.2% upper SES.

Measures

Male Roles Inventory-Revised

The MRNI-R (Levant et al., 2007) consists of 53 items, grouped into seven rationally-developed subscales. Items on each subscale are scored using a 7-point Likert-type scale ranging from 0 (strongly disagree) to 6 (strongly agree), with higher scores indicating more traditional masculinity ideology. The Avoidance of Femininity subscale was ignored in this analysis because it has no analogue in either of the other two instruments. Levant and

colleagues (2007) gave the MRNI-R to 170 undergraduates and found the following internal consistency ratings: Fear and Hatred of Homosexuals (.91), Extreme Self-Reliance (.78), Aggression (.80), Achievement / Status (.84), Nonrelational Sexuality (.79), and Restrictive Emotionality (.86).

Conformity to Male Norms Inventory

The CMNI contains 94 items scored for 11 factor analytically-derived subscales. Items on each subscale use a 4-point Likert-type scale ranging from 0 (strongly disagree) to 3 (strongly agree), with higher scores indicating greater conformity to the actions, thoughts, and feelings associated with that subscale. Mahalik and colleagues (2003) gave the CMNI to 752 people and found the following internal consistency ratings for the six subscales that will be used in this study: Disdain for Homosexuals (.90), Self Reliance (.85), Violence (.84), Winning (.88), Playboy (.88), and Emotional Control (.91).

Gender Role Conflict Scale-I

The GRCS contains 37 items that are scored for four factor analytically-derived subscales. The items are scored using a 6-point Likert-type scale ranging from 0 (strongly disagree) to 5 (strongly agree), with higher scores indicating more gender role conflict. Good and colleagues (1995) reported the following internal consistency ratings, averaged across eight studies, for the three subscales that will be used in this study: Success / Power / Competition (.87), Restrictive Emotionality (.85), and Restrictive Affectionate Behavior Between Men (.86).

Procedure

As the design of this study was correlational, volunteers were not required to come into a lab setting. Instead, they were emailed a link to a website where they could read the Informed Consent form. Upon agreeing to the study, they were instructed to complete the

CMNI, MRNI-R, GRCS, as well as a demographics questionnaire. Those who finished these tasks were given course credit for participation.

CHAPTER 3

RESULTS

There were two main analyses undertaken in this study. First, a Multitrait-Multimethod matrix was analyzed to glean descriptive information about the construct validity of these measures. After evaluating validity indicators, plausible threats to validity among the actual content of the measures were analyzed. Each of these analyses will be discussed in turn.

Evaluating Indices of Construct Validity

Readers accustomed to viewing quantitative comparisons in terms of statistical significance and hypothesis testing should be aware that the present analysis is different. Instead of counting statistical significance as the mark of a strong correlation, this analysis judges each correlation in terms of the continuum of strengths that are exhibited on the MTMM matrix. Specifically, the rules outlined in Table 1 were adopted to evaluate the relative strength of correlations in this study.

Table 1. Evaluation Criteria for Correlations in This Study

Type of Validity	Index	Poor	Modest	Good	Impressive
Convergent	MH r^2	< 0.10	0.10 to 0.49	0.50 to 0.70	> 0.70
Discriminant	MH r^2 - HH r^2	< 0.10	0.10 to 0.19	0.20 to 0.40	> 0.40
Method Effects	HM r^2 - HH r^2	> 0.30	0.20 to 0.30	0.10 to 0.19	< 0.10

Note. MH = Monotrait-Heteromethod, HH = Heterotrait-Heteromethod, and HM = Heterotrait-Monomethod

The MTMM matrices analyzed in this study were populated with disattenuated correlations. Disattenuating a correlation involves estimating the magnitude of the correlation as if the known measurement error did not exist. Because an analysis of error-free estimates was desirable in this study, only disattenuated correlations were evaluated.

Convergent validity was estimated by squaring the MH correlations. For instance, the CMNI and MRNI-R Dominance MH correlation among males (r = 0.677) was squared (r^2 = 0.458) to indicate the level of convergence between these scales. The third column on Tables 2 and 3 show the convergence indices found in this study.

To estimate discriminant validity, relevant HH correlations were averaged. Among males on the CMNI and MRNI-R Dominance subscales, 10 HH correlations – .560, .757, .741, .652, .663, .638, .347, .027, .364, and .193 – were averaged. The averaging involved transforming each Pearson r to a z-score, averaging all the z-scores, and then transforming the average z-score back to a Pearson r. In this case, the resulting average HH r was 0.530. The fifth column on Tables 2 and 3 lists the results of these data transformations. The final step in estimating discriminance involved subtracting relevant HH r^2 from relevant MH r^2. The far-right column on Tables 2 and 3 show the discriminant indices found in this study.

According to Tables 2 and 3, masculinity measures show a wide range of validity estimate strengths. Among males, convergence indices (MH r^2) ranged from a measly 0.07 to an impressive 0.71; they ranged from 0.01 to 0.64 among females. Estimates of discriminance (MH r^2 - HH r^2) ranged from a surprising -0.05 to an impressive 0.49 among males and from -0.03 to 0.51 among females. Thus, convergence and discriminance in this study reliably ranged from no validity to impressive validity. These findings are detailed and then summarized below.

Out of 12 subscale relationships among males (see Table 2), half of them failed to demonstrate good convergence. Two correlations indicated *little or no convergence* [CMNI

Table 2. Convergent and Discriminant Estimates Among Males

	MH *r*	MH r^2	Ave HH *r*	HH r^2	MH r^2 - HH r^2
Dominance					
C and M	0.677	0.458	0.530	0.281	0.177
C and G	0.601	0.361	0.330	0.109	0.252
G and M	0.448	0.201	0.480	0.230	-0.029
Homophobia					
C and M	0.842	0.709	0.465	0.216	0.493
C and G	0.684	0.468	0.405	0.164	0.304
G and M	0.732	0.536	0.505	0.255	0.281
Restrict Emot					
C and M	0.715	0.511	0.470	0.221	0.290
C and G	0.755	0.570	0.375	0.141	0.429
G and M	0.515	0.265	0.435	0.189	0.076
Nonrel Sex					
C and M	0.315	0.099	0.295	0.087	0.012
Aggression					
C and M	0.739	0.546	0.425	0.181	0.365
Self-Reliance					
C and M	0.262	0.069	0.345	0.119	-0.050

Note. C = CMNI, M = MRNI-R, G = GRCS

Table 3. Convergent and Discriminant Estimates Among Females

	MH *r*	MH r^2	Ave HH *r*	HH r^2	MH r^2 - HH r^2
Dominance					
C and M	0.464	0.215	0.325	0.106	0.109
C and G	0.721	0.520	0.195	0.038	0.482
G and M	0.258	0.067	0.295	0.087	-0.020
Homophobia					
C and M	0.800	0.640	0.360	0.130	0.510
C and G	0.570	0.325	0.290	0.084	0.241
G and M	0.623	0.388	0.395	0.196	0.192
Restrict Emot					
C and M	0.289	0.084	0.250	0.063	0.021
C and G	0.755	0.570	0.355	0.126	0.444
G and M	0.339	0.115	0.310	0.096	0.019
Nonrel Sex					
C and M	0.110	0.012	0.195	0.038	-0.026
Aggression					
C and M	0.231	0.053	0.245	0.060	-0.007
Self Reliance					
C and M	0.186	0.035	0.215	0.046	-0.011

Note. C = CMNI, M = MRNI-R, G = GRCS

& MRNI-R Nonrelational Sexuality (r^2 = 0.10), CMNI & MRNI-R Self-Reliance (r^2 = 0.07)], and four correlations indicated *modest convergence* [both GRCS Dominance (r^2 = 0.20, 0.36), CMNI & GRCS Homophobia (r^2 = 0.47), GRCS & MRNI-R Restrictive Emotionality (r^2 = 0.27)]. In contrast, one subscale indicated *impressive convergence* [CMNI & MRNI-R Homophobia (r^2 = 0.71)], and five subscales indicated *good convergence* [CMNI & MRNI-R Dominance (r^2 = 0.46), GRCS & MRNI-R Homophobia (r^2 = 0.54), both CMNI Restrictive Emotionality (r^2 = 0.51, 0.57), CMNI & MRNI-R Aggression (r^2 = 0.55)].

Among females (see Table 3), only three subscale relationships managed to demonstrate *good convergence* [CMNI & GRCS Dominance (r^2 = 0.52), CMNI & MRNI-R Homophobia (r^2 = 0.64), CMNI & GRCS Restrictive Emotionality (r^2 = 0.57)]. None of the convergence estimates among females were impressive. Four correlations indicated *modest convergence* [CMNI & MRNI-R Dominance (r^2 = 0.22), both GRCS Homophobia (r^2 = 0.33, 0.39), GRCS & MRNI-R Restrictive Emotionality (r^2 = 0.12)] and the other five indicated *little or no convergence* [GRCS & MRNI-R Dominance (r^2 = 0.07), CMNI & MRNI-R Restrictive Emotionality (r^2 = 0.08), CMNI & MRNI-R Nonrelational Sexuality (r^2 = 0.01), CMNI & MRNI-R Aggression (r^2 = 0.05), CMNI & MRNI-R Self-Reliance (r^2 = 0.04)].

Estimates of discriminance also painted a heterogenous picture. Among males (Table 2), 5 of the 12 subscale relationships failed to demonstrate good discriminance. Four of these five showed *little or no discriminance* [GRCS & MRNI-R Dominance (r^2 diff = -0.03), GRCS & MRNI-R Restrictive Emotionality (r^2 diff = 0.08), CMNI & MRNI-R Nonrelational Sexuality (r^2 diff = 0.01), CMNI & MRNI-R Self-Reliance (r^2 diff = -0.05)] and one showed *modest discriminance* [CMNI & MRNI-R Dominance (r^2 diff = 0.18)]. Five subscale relationships demonstrated *good discriminance* [CMNI & GRCS Dominance (r^2 diff = 0.18), both GRCS Homophobia (r^2 diff = 0.30, 0.28), CMNI & MRNI-R Restrictive Emotionality (r^2 diff = 0.29), CMNI & MRNI-R Aggression (r^2 diff = 0.37)] and two showed *impressive*

discriminance [CMNI & MRNI-R Homophobia (r^2 diff = 0.49), CMNI & GRCS Restrictive Emotionality (r^2 diff = 0.43)].

Among females (Table 3), three of the subscale relationships showed *impressive discriminance* [CMNI & GRCS Dominance (r^2 diff = 0.48), CMNI & MRNI-R Homophobia (r^2 diff = 0.51), CMNI & GRCS Restrictive Emotionality (r^2 diff = 0.44)] and one showed *good discriminance* [CMNI & GRCS Homophobia (r^2 diff = 0.24)]. However, two subscale relationships showed only *modest discriminance* [CMNI & MRNI-R Dominance (r^2 diff = 0.11), GRCS & MRNI-R Homophobia (r^2 diff = 0.19)] and six of them showed *little or no discriminance* [GRCS & MRNI-R Dominance (r^2 diff = -0.02), both MRNI-R Restrictive Emotionality (r^2 diff = 0.02, 0.02), CMNI & MRNI-R Nonrelational Sexuality (r^2 = -0.03), CMNI & MRNI-R Aggression (r^2 = -0.01), CMNI & MRNI-R Self-Reliance (r^2 = -0.01)].

Regarding convergence and discriminance among these measures, a pattern seemed to emerge. The subscales performed slightly better among males than females. Specifically, evaluations of convergence and discriminance among males were generally as good as, or better than, evaluations of those same subscales among females. For instance, the Aggression subscales show good convergence and discriminance among males, but they performed poorly among females. Moreover, half of the subscale relationships demonstrated good or impressive construct validity among males, whereas three-quarters of them demonstrated modest or insufficient construct validity among females. Therefore, this study found that masculinity measures performed as well, or better, among males as they did among females.

The next step of this analysis focused on indices of method effects. Method effects were estimated by combining the entire set of HM and HH correlations for each instrument in the same way that HH correlations were combined to estimate discriminance. For instance, the 15 HM correlations for the MRNI-R were combined and then compared with a combined

average of the 45 HH correlations that involved the MRNI-R. The far-right column on Tables 4 and 5 display the indices of method effects that were analyzed in this study.

As nearly identical results were found across the sexes, the pattern is simple. Regarding estimates of method effects (i.e., HM r^2 - HH r^2), two of the three inventories demonstrated substantial method-specific variance. The MRNI-R showed a large effect of method (r^2 diff = 0.45, 0.51), which indicates that its method of measuring masculinity greatly influences all correlations. The GRCS also showed a high method effect (r^2 diff = 0.29, 0.23), whereas the CMNI showed no effect of method at all (r^2 diff = -0.04, 0.01). Following a summary of the findings of this MTMM analysis the results will be evaluated more closely in light of the actual item content among these masculinity measures.

Table 4. Estimates of Method Effects Among Males

	HM *r*	**HM r^2**	**Ave HH *r***	**HH r^2**	**HM r^2 - HH r^2**
MRNI-R	0.805	0.648	0.440	0.194	0.454
CMNI	0.345	0.119	0.400	0.160	-0.041
GRCS	0.673	0.453	0.400	0.160	0.293

Table 5. Estimates of Method Effects Among Females

	HM *r*	**HM r^2**	**Ave HH *r***	**HH r^2**	**HM r^2 - HH r^2**
MRNI-R	.770	.593	.295	.087	0.506
CMNI	.280	.078	.270	.073	0.005
GRCS	.570	.325	.314	.099	0.226

Evaluating Item Content

Two patterns were noted above. First, it appears that the performance of the masculinity measures is inconsistent across the sexes (i.e., they perform slightly better among males than females). The second pattern, in contrast, suggests that method effects were very consistent across the sexes. Each of these patterns is likely due to the content of the subscale items. Therefore, this evaluation now looks more closely at the subscale content with the purpose of locating evidence of construct validity threats in this study. Tables 6 and 7 summarize the MTMM analysis, using the rules outlined in Table 1.

Gender-specific wording

One potential threat to construct validity in this study was the inclusion of female scores on GRCS items with gender-specific references (e.g., "I worry about failing and how it affects my doing well as a man"). To evaluate this threat, various indices of female performance on the GRCS items were analyzed (see Table 8).

Surprisingly, there is no evidence of an effect due to gender-specific item content. Internal consistency estimates among females (*alpha* = 0.90, 0.84, and 0.88) were sufficient across all three GRCS subscales. Moreover, females' scores on the gender-specific items (*mean* = 2.2) were similar to their scores on items without references to gender (*mean* = 2.4). Also, the item-total correlations – which are an estimate of item validity – were of a similar magnitude among the gender-specific items (average $r = 0.58$) as they were among the other items (average $r = 0.61$). Six out of the seven items on the GRCS Homophobia scale have male-specific items. Table 7 indicates that the two GRCS Homophobia subscale relationships performed slightly worse among females than CMNI & MRNI-R Homophobia. However, this pattern also emerged among males (Table 6). Across all of these indices, there were no differences between the sexes.

Table 6. Summary of Construct Validity Evaluations Among Males

	Insufficient	**Modest**	**Good**	**Impressive**
Convergent	*Nonrelational Sexuality* (C & M) *Self-Reliance* (C & M)	*Dominance* (C & G, G & M) *Homophobia* (C & G) *Restrictive Emotionality* (G & M)	*Dominance* (C & M) *Homophobia* (G & M) *Restrictive Emotionality* (C & M, C & G) *Aggression* (C & M)	*Homophobia* (C & M)
Discriminant	*Dominance* (G & M) *Restrictive Emotionality* (G & M) *Nonrelational Sexuality* (C & M) *Self-Reliance* (C & M)	*Dominance* (C & M)	*Dominance* (C & G) *Homophobia* (C & G, G & M) *Restrictive Emotionality* (C & M) *Aggression* (C & M)	*Homophobia* (C & M) *Restrictive Emotionality* (C & G)
Method Effects	MRNI-R	GRCS		CMNI

Table 7. Summary of Construct Validity Evaluations Among Females

	Insufficient	**Modest**	**Good**	**Impressive**
Convergent	*Dominance* (G & M) *Restrictive Emotionality* (C & M) *Nonrelational Sexuality* (C & M) *Aggression* (C & M) *Self-Reliance* (C & M)	*Dominance* (C & M) *Homophobia* (C & G, G & M) *Restrictive Emotionality* (G & M)	*Dominance* (C & G) *Homophobia* (C & M) *Restrictive Emotionality* (C & G)	
Discriminant	*Dominance* (G & M) *Restrictive Emotionality* (C & M, G & M) *Nonrelational Sexuality* (C & M) *Aggression* (C & M) *Self-Reliance* (C & M)	*Dominance* (C & M) *Homophobia* (G & M)	*Homophobia* (C & G)	*Dominance* (C & G) *Homophobia* (C & M) *Restrictive Emotionality* (C & G)
Method Effects	MRNI-R	GRCS		CMNI

Table 8. Female Performance on Male-Oriented Items

Subscale Name	**Item Content**	**Average Item Score**	**Item-Total Correlation**
Restrictive Affectionate Behavior Between Men	*Verbally expressing my love to another man is difficult for me.*	*2.0*	*0.42*
	Affection with other men makes me tense.	*2.0*	*0.71*
	Men who touch other men make me uncomfortable.	2.3	0.53
	Hugging other men is difficult for me.	*1.5*	*0.67*
	I am sometimes hesitant to show my affection to men because of how others might perceive me.	*2.0*	*0.59*
	Being very personal with other men makes me feel uncomfortable.	*2.1*	*0.67*
	Men who are overly friendly to me, make me wonder about their sexual preference (men or woman).	*1.8*	*0.64*

Note. Italics indicate gender-specific content. Scores on the GRCS: 0 = Strongly Disagree, 5 = Strongly Agree (1, 2, 3, and 4 are not labeled).

Method Effect

Another plausible validity threat in this study was the strong MRNI-R method effect. This effect is likely due to the way the MRNI-R items were constructed. Each of the MRNI-R items uses third-person stems (e.g., “A man should not react when other people cry”, “Men should not talk with a lisp because this is a sign of being gay”). In contrast, only one-quarter of the CMNI items use third-person item stems; the other three-quarters use first-person stems (e.g., “I never share my feelings”, “I make sure that people think I am heterosexual”). Table 4 and 5 indicate that the CMNI has a low method effect across the sexes. In addition to its use of both first- and third-person stems, the low CMNI method effect may be due to its employment of reverse-scored items (e.g., “Being thought of as gay is not a bad thing”) as well as a variety of statement intensities (e.g., “It bothers me when I have to ask for help”, “I hate asking for help”). The MRNI-R, on the other hand, employs overly redundant intensity by using the word “should” on each item.

A relatively high method effect for the GRCS was also consistent across the sexes. Having dismissed the possibility of gender-specificity as the cause of this effect, the researcher turned to another explanation. The GRCS was used to measure only three constructs in this study and there were indications that two of those three – homophobia and restrictive emotionality – were confounded. First of all, looking back at Tables 2 and 3, we see a very high correlation between the GRCS Homophobia and all three measures of restrictive emotionality; these correlations are just as strong as convergence estimates for GRCS Homophobia. Second, looking at the GRCS Homophobia items (Table 8), we see that they focus on anxiety about the act of expressing affection for men (e.g., "Verbally expressing my love to another man is difficult for me"). This all points to a construct confound, which may explain why this subscale performed worse than other measures of homophobia. It is also the likely cause of the high method effect for this instrument.

Mismatches Between Definitions and Constructs

Notable differences of construct definition were evident among the measures, and all six will be reviewed in turn. The basic argument of this section is that poor convergence and discriminance estimates are caused by inconsistent construct definitions across scales. One aim of this discussion is to shed light on the nature of these inconsistencies and the effect they had on the findings of this study. Another aim is to present plausible connections between constructs from masculinity and other social sciences, as was discussed in the introduction.

Beginning with dominance, we saw on Tables 6 and 7 that the GRCS and MRNI-R subscales performed insufficiently across both sexes. The GRCS content is listed on Table 8 and the MRNI-R content is on Table 9. Looking at these items, the GRCS subscale seems to tap into competitiveness (e.g., "Competing with others is the best way to succeed"), or what cultural psychologists call "vertical individualism." In contrast, the MRNI-R subscale seems

Table 9. Content of the CMNI and MRNI-R Dominance Subscales

Instrument	**Subscale Name**	**Item Content**
CMNI	Dominance	In general, I must get my way. I should be in charge. I am comfortable trying to get my way. Things tend to be better when men are in charge. I make sure people do as I say.
MRNI-R	Achievement / Status	The President of the US should always be a man. Men should be the leader in any group. A man should always be the boss. A man should provide the discipline in the family. A man should always be the major provider in his family. In a group, it is up to the men to get things organized and moving ahead.

to tap into male entitlement beliefs (e.g., "Men should be the leader in any group") and may be closer to concepts of social dominance orientation. Because the convergence estimates were low among males and females, we can assume that these attitude clusters were unrelated in this sample. In regards to the CMNI item content, the theme appears to be bossiness (e.g., "I make sure people do as I say"). It is helpful to define these subscales with three distinct names – vertical individualism, male dominance orientation, bossiness – because they behaved distinctly among males and females.

Tables 6 and 7 indicate a close relationship between CMNI bossiness and GRCS vertical individualism among females but not among males. On the other hand, we also see a good relationship between MRNI-R male dominance orientation with CMNI bossiness among males but not among females. This begins to shed light on the pattern of inconsistent performance across the sexes among these instruments.

Turning to homophobia, recall the focus of the GRCS Homophobia subscale – anxiety about the act of expressing affection for men. Reviewing the item content on the other homophobia measures (Table 10), we see that the CMNI Homophobia subscale items maintain a consistent focus on anxiety about being perceived as gay by others (e.g., "I would

Table 10. Content of the CMNI and MRNI-R Homophobia Subscales

Instrument	**Subscale Name**	**Item Content**
CMNI	Disdain for Homosexuals	It is important to me that people think I am heterosexual. Being thought of as gay is not a bad thing. (Reverse-scored) I make sure that people think I am heterosexual. I would be furious if someone thought I was gay. It would not bother me at all if someone thought I was gay. (Reverse-scored) It would be awful if people thought I was gay. I like having gay friends. (Reverse-scored) I would feel uncomfortable if someone thought I was gay. If someone thought I was gay, I would not argue with them about it. (Reverse-scored) I try to avoid being perceived as gay.
MRNI-R	Fear and Hatred of Homosexuals	Homosexuals should never marry. Men should not talk with a lisp because this is a sign of being gay. All homosexual bars should be closed down. Homosexuals should not be allowed to serve in the military. Men should never compliment or flirt with another male. Men should never hold hands or show affection toward one another. Homosexuals should never kiss in public. A man should not continue a friendship with another man if he finds out that the other man is homosexual. Homosexuals should be barred from the teaching profession. It is disappointing to learn that a famous athlete is gay.

be furious if someone thought I was gay"). In contrast, the MRNI-R items seem to tap attitudes about restricting the social behavior of homosexual people (e.g., "Homosexuals should never marry"). That is, the CMNI subscale seems to measure a type of image-concern and the MRNI-R subscale seems to measure a type of oppressive ideology. Given this difference, the fact that these subscales demonstrated good convergence and discriminance across the sexes is somewhat surprising. Moreover, there is no indication among the item content that these measures tap into visceral responses towards homosexual behavior. This may suggest that these subscales tap the multidimensional construct of homonegativity, rather than the unidimensional homophobia construct.

The measures of restrictive emotionality, as seen on Tables 6 and 7, were poorly related among males and females. The GRCS subscale appears to tap into verbal signs of emotion (e.g., "I often have trouble finding words that describe how I am feeling"), whereas the MRNI-R subscale seems to measure attitudes about male nonverbal emotionality (e.g., "One should not be able to tell how a man is feeling by looking at his face"). Therefore, in this sample it appears that restricting verbal expression of emotion is unrelated to restricting nonverbal emotionality. Looking at Table 11, we also see that the CMNI subscale employs items that do not specify the type of emotionality – verbal or nonverbal – being restricted (e.g., "I never share my feelings"). This broadness of definition is a likely reason that the CMNI subscale showed good convergence estimates.

Table 11. Content of the CMNI and MRNI-R Restrictive Emotionality Subscales

Instrument	**Subscale Name**	**Item Content**
CMNI	Emotional Control	It is best to keep your emotions hidden. I should take every opportunity to show my feelings. (Reverse-scored) Feelings are important to show. (Reverse-scored) I love to explore my feelings with others. (Reverse-scored) I bring up my feelings when talking to others. (Reverse-scored) I never share my feelings. I like to talk about my feelings. (Reverse-scored) I tend to keep my feelings to myself. I tend to share my feelings. (Reverse-scored) I hate it when people ask me to talk about my feelings. I prefer to stay unemotional.
MRNI-R	Restrictive Emotionality	A man should not react when other people cry. A man should never admit when others hurt his feelings. Men should be detached in emotionally charged situations. I might find it a little silly or embarrassing if a male friend of mine cried over a sad love story. Fathers should teach their sons to mask fear. One should not be able to tell how a man is feeling by looking at his face. Men should not be too quick to tell others that they care about them.

Again, we see an inconsistency across the sexes among measures of restrictive emotionality: the MRNI-R subscale performed poorly among females, whereas it showed good convergence with the CMNI subscale among males. This is likely due to the gender-specific content of the MRNI-R subscale. Therefore, this study found that the MRNI-R definition (i.e., male-specific nonverbal emotional restriction) was inconsistently related to the CMNI definition (i.e., nongendered emotional control), but was consistently unrelated to the GRCS definition (i.e., nongendered verbal emotional restriction), of this construct.

Having discussed the subscales that involved the GRCS, we now turn to the three subscales that were measured by the MRNI-R and CMNI only. Looking at Table 12, we see evidence of another notable distinction in construct definition among measures of

Table 12. Content of the CMNI and MRNI-R Nonrelational Sexuality Subscales

Instrument	**Subscale Name**	**Item Content**
CMNI	Playboy	If I could, I would frequently change sexual partners. An emotional bond with a partner is the best part of sex. (Reverse-scored) If I could, I would date a lot of different people. I would only have sex if I was in a committed relationship. (Reverse-scored) I only get romantically involved with one person. (Reverse-scored) I would feel good if I had many sexual partners. Long term relationships are better than casual sexual encounters. (Reverse-scored) Emotional involvement should be avoided when having sex. It would be enjoyable to date more than one person at a time. I like emotional involvement in a romantic relationship. (Reverse-scored) A person shouldn't get tied down to dating just one person. I would only be satisfied with sex if there was an emotional bond. (Reverse-scored)
MRNI-R	Nonrelational Sexuality	Men should always like to have sex. A man should not turn down sex. It is ok for a man to use any and all means to “convince” a woman to have sex. Men should always take the initiative when it comes to sex. A man shouldn't bother with sex unless he can achieve an orgasm. A man should always be ready for sex.

nonrelational sexuality. The CMNI appears to tap into sociosexuality (e.g., "Emotional involvement should be avoided when having sex"), whereas the MRNI-R subscale seems to measure attitudes about how sex should be initiated (e.g., "Men should always take the initiative when it comes to sex"). Convergence estimates for these measures were consistently poor across the sexes, which may suggest that sociosexuality is unrelated to preferences for male sexual initiation.

A third example of inconsistent validity across the sexes in this study was found among measures of aggression. The CMNI and MRNI-R subscales performed well among males but poorly among females. Yet again, this finding is likely due to the way these instruments defined the constructs. Looking at Table 13, we see that the CMNI items appear to measure attitudes toward violence (e.g., "Sometimes violent action is necessary"), whereas

Table 13. Content of the CMNI and MRNI-R Aggression Subscales

Instrument	**Subscale Name**	**Item Content**
CMNI	Violence	If there is going to be violence, I find a way to avoid it. (Reverse-scored) I believe that violence is never justified. (Reverse-scored) I am disgusted by any kind of violence. (Reverse-scored) I like fighting. Sometimes violent action is necessary. I am willing to get into a physical fight if necessary. Violence is almost never justified. (Reverse-scored) No matter what the situation I would never act violently. (Reverse-scored)
MRNI-R	Aggression	Men should excel at contact sports. If another man flirts with the women accompanying a man, this is a serious provocation and the man should respond with aggression. Boys should be encouraged to find a means of demonstrating physical prowess. Men should get up to investigate if there is a strange noise in the house at night. It is important for a man to take risks, even if he might get hurt. When the going gets tough, men should get tough. I think a young man should try to be physically tough, even if he is not big.

the MRNI-R items seem to tap into attitudes about male toughness (e.g., "I think a young man should try to be physically tough, even if he's not big"). Attitudes towards violence were related to attitudes about male toughness among males, but not among females.

The final masculinity construct evaluated in this study is self-reliance. Looking at Table 14, the CMNI appears to measure help-aversion (e.g., "Asking for help is a sign of failure"), whereas the MRNI-R appears to measure a do-it-yourself ideology (e.g., "Men should be able to fix most things around the house"). In other words, the CMNI may measure "counterdependence," whereas the MRNI-R may measure something like "horizontal individualism" (see discussion in Chapter 1). The consistently poor convergence of these measures across the sexes may indicate that measures of counterdependence are unrelated to measures of horizontal individualism.

In sum, this preliminary content analysis involved searching for information that could help explain the results of this MTMM analysis. The patterns noted in the preceding section were explained in terms of (a) a construct confound on the GRCS, (b) the very high MRNI-R

Table 14. Content of CMNI and MRNI-R Self-Reliance Subscales

Instrument	**Subscale Name**	**Item Content**
CMNI	Self Reliance	I hate asking for help. I ask for help when I need it. (Reverse-scored) Asking for help is a sign of failure. I never ask for help. I am not ashamed to ask for help. (Reverse-scored) It bothers me when I have to ask for help.
MRNI-R	Self Reliance	A man should be able to perform his job even if he is physically ill or hurt. Men should not borrow money from friends or family members. Men should have home improvement skills. Men should be able to fix most things around the house. A man must be able to make his own way in the world. A man should never count on someone else to get the job done. A man should know how to repair his car if it should break down.

method effect, and (c) the way that the instruments defined the constructs. The surprising lack of convergence found among many of the measures was explained in terms of mismatches between constructs and definitions. Finally, some hypotheses were made regarding how these masculinity measures match up with constructs outside of masculinity science. Table 15 details the results of this second set of analyses.

Table 15. Summary of Masculinity Content Analysis

Construct	**Instrument**	**Emphasis of Item Content**
Dominance	MRNI-R GRCS CMNI	TMI + Dominance Orientation Individualism (vertical) Dominant personality
Homophobia	MRNI-R GRCS CMNI	TMI + Homonegativity Homophobia + Emotional restriction Homonegativity
Restrictive Emotionality	MRNI-R GRCS CMNI	TMI + Emotional restriction (nonverbal) Emotional restriction (verbal) Emotional restriction
Nonrelational Sexuality	MRNI-R CMNI	TMI + Sexual initiation preference Sociosexuality
Aggression	MRNI-R CMNI	TMI + Overt aggressiveness Overt aggressiveness
Self-Reliance	MRNI-R CMNI	TMI + Individualism (horizontal) Counterdependence

Note. Consistency of wording in the third column indicates good construct convergence. *TMI* = Traditional Masculinity Ideology, which is the construct that has typically been used to describe what the MRNI measures.

CHAPTER 4

DISCUSSION

The purpose of this study was to investigate the construct validity of subscales from the Conformity to Masculine Norms Inventory (CMNI), the Male Role Norms Inventory-Revised (MRNI-R) and the Gender Role Conflict Scale (GRCS). Disattenuated subscale correlations from Multitrait Multimethod (MTMM) matrices were evaluated in terms of convergent and discriminant validity as well as method effects. In MTMM analysis, construct validity is demonstrated when convergent estimates are high, discriminant estimates are low, and the magnitude-difference between them is sufficiently large. Moreover, multidimensional measures demonstrate structural validity when estimates of method effects are low relative to discriminant estimates.

In this study, the performance of the masculinity measures was inconsistent across the sexes (i.e., they perform slightly better among males than females). In contrast, method effects were very consistent across the sexes. Plausible threats to validity included a construct confound on the GRCS and a very high MRNI-R method effect. However, the surprising lack of convergence found among many of the measures in this study was likely due to mismatches between constructs and definitions. Therefore, it appears that masculinity scientists would be prudent to focus attention on the definitions of masculine constructs. Specifically, the self-reliance and nonrelational sexuality constructs may benefit from redefinition.

One limitation of this study was that it analyzed a data set gathered from a small, homogenous group of participants. Future research should gather larger samples that

represent more ethnic, religious, and geographic diversity. It is also noteworthy that about two-thirds of this sample was female, which made the interpretation of findings complex. For instance, measures of aggression performed well among males but poorly among females. Future research should look into the causes of inconsistent construct validity across the sexes among measures of gender roles. Surprisingly, it appears that females performed similarly across GRCS items, one-third of which included male-specific content. To further understand this, future research should look into cognitive strategies employed by female participants on items with male-specific content.

This study found that the MRNI-R subscales are highly correlated with one another. Future masculinity research should not use the MRNI-R as a multidimensional instrument. Instead, the MRNI-R Total score should be used as a broad measure of beliefs about masculinity. Perhaps a short-version of the MRNI-R would increase its utility. In contrast, the observed low method effect for CMNI indicates that it is a multidimensional instrument.

To further investigate what these measures tap into, future research should cast a wider nomological net. Towards this end, Table 15 can be read as a list of testable hypotheses. Measures of homophobia versus homonegativity, restrictive versus avoidant emotionality, overt versus relational aggression, and horizontal versus vertical individualism could be used to test these hypotheses. For instance, the CMNI Playboy subscale could be compared with valid measures of sociosexuality and CMNI Self Reliance could be related to measures of counterdependence.

Finally, the MTMM analysis involves looking at multiple methods of measuring constructs. However, each of the methods used in this study were self-report instruments. Future research into the construct validity of male roles should give preference to other methodologies (e.g., behavioral observations, third-party reports). To locate other methods, it may be necessary to look outside of the masculinity science literature.

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